

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for concentrating a solution in which a solute is dissolved to in a solvent, comprising steps of:

generating a solvent gas from said solution in a concentrating tank to concentrate said solution; and

condensing said solvent gas in said concentrating tank to recover said solvent gas as a condensed ~~solvent~~, solvent,

wherein said concentrating tank includes a tank main body for containing said solution and a roof disposed on said tank main body, and an inclined inner surface of said roof forms a condensing surface for condensing and recovering said solvent gas.

2. (canceled).

3. (currently amended): A method as claimed in claim ~~2~~, 1, wherein a gutter is attached near a lower end of said roof to said tank main body so as to receive and recover said condensed solvent flowing downwards on said condensing surface.

4. (original): A method as claimed in claim 3, wherein a temperature of said inner surface of said roof is lower than that of said solution in said tank main body.

5. (original): A method as claimed in claim 4, wherein a draining pipe is attached to a bottom of said tank main body for draining said concentrated solution from said concentrating tank.

6. (currently amended): ~~A method as claimed in claim 5,~~ A method for concentrating a solution in which a solute is dissolved in a solvent, comprising steps of:

generating a solvent gas from said solution in a concentrating tank to concentrate said solution; and

condensing said solvent gas in said concentrating tank to recover said solvent gas as a condensed solvent,

wherein said concentrating tank includes at least one flash nozzle inserted into said tank main body, and said at least one flash nozzle is disposed under a liquid surface of said solution in said concentrating tank so as to discharge a fresh solution into said concentrated solution.

7. (currently amended): A method as claimed in claim 6, ~~5,~~ further comprising a step of:
preserving a height of said solution-liquid surface of said solution in said tank main body to a predetermined-constant value.

8. (original): A method as claimed in claim 7, wherein the temperature of said solution in said tank main body is lower than a boiling point of said solvent.

9. (original): A method as claimed in claim 8, wherein residence time of said solution in said concentrating tank is from 0.5 minute to 20 minutes.

10. (currently amended): ~~A method as claimed in claim 9,~~ A method for concentrating a solution in which a solute is dissolved in a solvent, comprising steps of:

generating a solvent gas from said solution in a concentrating tank to concentrate said solution,

condensing said solvent gas in said concentrating tank to recover said solvent gas as a condensed solvent,

wherein said concentrating tank includes a tank main body for containing said solution and a roof disposed on said tank main body, and an inclined inner surface of said roof forms a condensing surface for condensing and recovering said solvent gas,

wherein a gutter is attached near a lower end of said roof to said tank main body so as to receive and recover said condensed solvent flowing downwards on said condensing surface,

wherein a temperature of said inner surface of said roof is lower than that of said solution in said tank main body,

wherein a draining pipe is attached to a bottom of said tank main body for draining said concentrated solution from said concentrating tank,

wherein said concentrating tank includes at least one flash nozzle inserted into said tank main body, and said at least one flash nozzle is disposed under a liquid surface of said solution in said concentrating tank so as to discharge a fresh solution into said concentrated solution,

said method further comprising the step of:

preserving a height of said liquid surface of said solution in said tank main body to a constant value,

wherein the temperature of said solution in said tank main body is lower than a boiling point of said solvent,

wherein residence time of said solution in said concentrating tank is from 0.5 minute to 20 minutes,

wherein said solution is previously filtrated with a primary filtration apparatus, said concentrated solution drained from said concentrating tank is filtrated with a secondary filtration apparatus, a differential rate R_v of filtration amount between said first and secondary filtration apparatus is at most 50%, and said differential rate R_v is calculated from a following formula:

$$R_v (\%) = \{(V_1 - V_2)/V_1\} \times 100;$$

wherein V_1 is mass of said solute in said solution filtrated through a unit size of said primary filtration apparatus, before a first filtration pressure of said solution flowing in said primary filtration apparatus becomes to a first predetermined value, and

wherein V_2 is mass of said solute in said concentrated solution filtrated through a unit size of said secondary filtration apparatus, before a second filtration pressure of said concentrated solution flowing in said secondary filtration apparatus becomes to a second predetermined value.

11. (currently amended): A method as claimed in claim 6, 5, wherein said solute contains polymer.

12. (original): A method as claimed in claim 11, wherein said polymer is cellulose acylate.

13. (original): A method as claimed in claim 11, wherein a polymer concentration of said concentrated solution is from 12 wt.% to 40 wt.%.

14. (original): A method as claimed in claim 13, wherein a polymer concentration of said solution is from 5 wt.% to 30 wt.%.

15. (original): A method as claimed in claim 11, wherein a difference of the polymer concentration between said solution and said concentrated solution is from 1 wt.% to 15 wt.%.

16. (original): A method as claimed in claim 15, wherein viscosity of said concentrated solution is from 1 Pa·s to 200 Pa·s.

17. (original): A method as claimed in claim 16, wherein viscosity of said solution is from 0.1 Pa·s to 100 Pa·s.

18. (original): A method as claimed in claim 15, wherein temperature of said concentrated solution is from 20 °C to 70 °C when said concentration solution is drained from said concentrating tank.

19. (currently amended): A method as claimed in claim 18, wherein the temperature of said solution is from 50 to 180 when said solution is discharged from said at least one flash nozzle.

20. (original): A method as claimed in claim 15, wherein absolute pressure of gas above said solution surface in said concentrating tank is from 500 hPa to 1100 hPa.

21. (currently amended): A method as claimed in claim 20, wherein when said solution is discharged from said at least one flash nozzle, the pressure of said solution is at least the saturated vapor pressure at the temperature of said solution, and at most 5 MPa higher than the saturated vapor pressure.

22. (currently amended): A method as claimed in claim 15, wherein ~~gas content in said~~
concentrated solution is has a gas content of from 1 mg/L to 200 mg/L.

23. (currently amended): A method as claimed in claim ~~22, 15,~~ wherein the gas content
in said solution is from 10 mg/L to 500 mg/L.

24. (currently amended): A method as claimed in claim 15, ~~wherein further comprising~~
the step of producing a polymer film from said concentrated solution is used for producing a
polymer film solution.

25. (original): A method as claimed in claim 24, wherein said polymer film is produced
in a co-casting method in which said concentrated solution and other solutions are cast on a band
at the same time.

26. (original): A method as claimed in claim 24, wherein said polymer film is produced
in a sequentially casting method in which said concentrated solution and other solutions are cast
on a band sequentially.

27. (currently amended): ~~A method as claimed in claim 24, A method for concentrating a~~
solution in which a solute is dissolved in a solvent, comprising steps of:

generating a solvent gas from said solution in a concentrating tank to concentratc said
solution,

condensing said solvent gas in said concentrating tank to recover said solvent gas as a
condensed solvent,

wherein said concentrating tank includes a tank main body for containing said solution and a roof disposed on said tank main body, and an inclined inner surface of said roof forms a condensing surface for condensing and recovering said solvent gas,

wherein a gutter is attached near a lower end of said roof to said tank main body so as to receive and recover said condensed solvent flowing downwards on said condensing surface,

wherein a temperature of said inner surface of said roof is lower than that of said solution in said tank main body,

wherein a draining pipe is attached to a bottom of said tank main body for draining said concentrated solution from said concentrating tank.

wherein said concentrating tank includes at least one flash nozzle inserted into said tank main body, and said at least one flash nozzle is disposed under a liquid surface of said solution in said concentrating tank so as to discharge a fresh solution into said concentrated solution,

wherein said solute contains polymer,

wherein a difference of the polymer concentration between said solution and said concentrated solution is from 1 wt.% to 15 wt.%,

said method further comprising the step of producing a polymer film from said concentrated solution,

wherein said polymer film is cut in a widthwise direction to five film samples having a area of 5 cm², and an average number (~~total number/5~~) of light point defects having a size of at least 20 μm is zero on the film sample, having a size of at least 10 μm and less than 20 μm is a maximum of 10, and having a size of at least 5 μm and less than 10 μm is a maximum of 10.

28. (currently amended): A method as claimed in claim 24, ~~wherein further comprising~~
the step of producing from said polymer film is used as a protective film for a polarizing filter.

29. (currently amended): A method as claimed in claim 28, ~~wherein further comprising~~
the step of producing from said polymer film is used for an optical compensation sheet.

30. - 32. (canceled).

33. (new): The method as claimed in claim 1, wherein said inclined inner surface of said
roof contains grooves.